



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,176	02/09/2004	Shaun T. Mesher	355-8	6755

20212 7590 03/21/2006
THOMPSON LAMBERT
SUITE 703D, CRYSTAL PARK TWO
2121 CRYSTAL DRIVE
ARLINGTON, VA 22202

EXAMINER

METZMAIER, DANIEL S

ART UNIT	PAPER NUMBER
----------	--------------

1712

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,176

Applicant(s)

MESHER ET AL.

Examiner

Daniel S. Metzmaier

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9 Feb 2004 & 10 Aug. 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☒ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/10/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-22 are pending.

Claim Objections

1. Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Rule 37 CFR 75(c) states: "One or more claims may be presented in dependent form, referring back to and further limiting another claim or claims in the same application." (Emphasis added). Claim 9 is dependent on claim 10.

Claim interpretation

2. the terms "aqueous acid" referred to in claim 8 has been interpreted as the acid and water. The ketones, esters, and cyclic ethers that have been limited to a carbon number range are interpreted as the total carbons in the respective ketones, esters, and cyclic ethers.

Double Patenting

3. Claim 18 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 6. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-6, 10, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Subbaraman et al, 5,674,923. See column 4, lines 51-64; column 9, lines 39-47; and examples. The claims employ open transitional language, i.e., “comprising”. Therefore, the claims do not exclude the further ingredients of the reference compositions.

6. Claims 1-8, 10, 18, and 20-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Wipf AG Verpackungen Industriestrasse, EP 0 384 458 A1 (hereafter Wipf AG), as evidenced by Derwent Abstract, AN 1990-262476. Wipf AG (Derwent and tables throughout) disclose waste solvent solutions for separation, which comprise (page 2, lines 18 et seq) MEK (25 to 30 %), ethyl acetate (25 to 35 %), ethanol (20 to 25 %), water (10 to 15%), and acetic acid.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 1712

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 9, 11-17, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wipf AG Verpackungen Industriestrasse, EP 0 384 458 A1 (hereafter Wipf AG), as evidenced by Derwent Abstract, AN 1990-262476, as applied to claims 1-8, 10, 18, and 20-21, above, and further in view of Boehm et al, US 4,038,219. Wipf AG (Derwent and tables throughout) disclose waste solvent solutions for separation, which comprise (page 2, lines 18 et seq) MEK (25 to 30 %), ethyl acetate (25 to 35 %), ethanol (20 to 25 %), water (10 to 15%), and acetic acid.

Wipf AG differs from the claims in the presence of hydrochloric acid and the presence of a cyclic ether such as THF.

Boehm et al (abstract ; figure ; column 5, lines 1-2 and 58-65 ; column 6, lines 1-8; column 7, lines 65 et seq; examples; and claims) disclose reclamation of scrap polymers and the extraction of plasticizers therefrom resulting in a solvent mixture to be subsequently separated into their components. Boehm et al discloses the alternative or combined use of MEK or THF. Boehm et al (claims) further teaches the use of hydrochloric acid and esters and lower alcohols.

Boehm et al (column 6, lines 1 et seq) further teaches the formation of acetic acid in the processes of Boehm et al and shown in the water feed materials of Wipf AG.

These references are combinable because they teach separations and compositions as feed for said separations. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ the compositions of Boehm et al in the separation process of the Wipf AG, wherein the concentrations of typical feed waste solvents are shown to be conventional.

Furthermore, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to MEK with THF for the advantage or tailoring said solvents to the particular scrap polymer reclamation in the Boehm et al reference. Said solvents are known solvents in conventional processes taught in the Boehm et al reference resulting in a feed compositions for separation in the Wipf AG processes.

To the extent the concentrations differ from those claimed, it would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to vary the concentrations of the solvents based on the reclamation of the particular scrap polymers being treated in the Boehm et al reference.

10. Claims 1 and 6-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qu et al, US 6,435,277. Qu et al (abstract; column 16-18 and claims) is directed to acidizing wells. Qu et al (column 17) teaches pretreatment of the well with an acid. Qu et al further teaches that when a well contains a water bearing zone, it is advantageous to employ a mutual solvent including esters, e.g., ethyl acetate; ethers, e.g.,

Art Unit: 1712

tetrahydrofuran; and lower alcohols, e.g., methanol. Said solvent treatment is followed by the acid treatment.

Qu et al differs from the claims in the combination of each of the solvents in a single treatment and the claimed concentrations.

It is generally *prima facie* obvious to use in combination two or more ingredients that have previously been used separately for the same purpose in order to form a third composition useful for that same purpose. In re Kerkhoven, 626 F.2d 846, 205 USPQ 1069 (CCPA 1980); In re Pinten, 459 F.2d 1053, 173 USPQ 801 (CCPA 1972); In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971); In re Crockett, 279 F.2d 274, 126 USPQ 186 (CCPA 1960). As stated in Kerkhoven and Crockett, the idea of combining them flows logically from their having been individually taught in the prior art. In the instant case, the ester, ether, and alcohol solvents are all taught for the same function as a mutual solvent of the oil and water.

As different treatment areas vary in solvent requirements depending on the oils and impurities therein, it would have been obvious to one of ordinary skill in the art at the time of applicants' invention to combine the solvents and vary their concentrations to provide solvency for a particular oil water system and/or to provide a broad based solvent system.

11. Claims 2-5 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Qu et al, US 6,435,277, as applied to claims 1 and 6-18, above, and further in view of Loomis et al, US 2,124,530. Qu et al (column 17) teaches pretreatment of the well with an acid. Qu et al further teaches that when a well contains a water bearing zone, it

Art Unit: 1712

is advantageous to employ a mutual solvent including esters, e.g., ethyl acetate; ethers, e.g., tetrahydrofuran; and lower alcohols, e.g., methanol. Said solvent treatment is followed by the acid treatment as set forth above.

Qu et al differs from the claims in the incorporation of a ketone solvent as a mutual solvent in acidizing.

Loomis et al (page 3, left column, lines 51 et seq) discloses methyl ethyl ketone as a preferred solvent among other solvents including ethers and lower alcohols in acid treating methods. Loomis et al (Table II) further teaches conventional concentrations of MEK in acidizing operations.

It is generally *prima facie* obvious to use in combination two or more ingredients that have previously been used separately for the same purpose in order to form a third composition useful for that same purpose, wherein the idea of combining them flows logically from their having been individually taught in the prior art. In the instant case, the ketone, ester, ether, and alcohol solvents are all taught for the same function as a solvent of the oil and water acidizing systems.

As different treatment areas vary in solvent requirements depending on the oils and impurities therein, it would have been obvious to one of ordinary skill in the art at the time of applicants' invention to combine the conventionally known solvents and vary their concentrations, which are conventional in the art to provide solvency for a particular oil water system and/or to provide a broad based solvent system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (571) 272-1089. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel S. Metzmaier
Primary Examiner
Art Unit 1712

DSM